CLAIMS

We claim:

1. A method for controlling body fat in an animal, the method comprising the step of:

reducing lipoxygenase activity in the animal sufficient to control body fat in the animal.

2. A method for controlling body fat in an animal, the method comprising the step of:

administering a lipoxygenase inhibitor to the animal at a dose sufficient to control body fat in the animal.

3. The method of claim 2, wherein the lipoxygenase inhibitor is selected from the group consisting of NDGA, AA861, Indomethacin, ETYA, SHA, Baicalein, 3,4-dihydroxycinnamic acid, cinnamyl-3,4-dihydroxy-a-cyanocinnamate, Gossypol, 5,6-dehydro arachidonic acid, Baeomycesic acid, Baicalein monohydrate, 3,4-dihydroxyphenyl ethanol, 4,5-dehydro docosahexaenoic acid, eicosatriynoic acid, 5-HETE lactone, 5(S)-HpETE, 12(S)-HpETE, 15(S)-HpETE, 15(S)-HETrE, 9,12-octadecadiynoic acid, a-pentyl-3-(2-quinolinylmethoxy)-benzenemethanol, BHA, BHT, 3-amino-1-/m-(trifluoromethyl)phenyl/-2-pyrazoline, and 6,9-diepoxy-6,9-phenylimino-delta 6,8-prostaglandin I 1.

4. The method of claim 2, wherein the lipoxygenase inhibitor is fed to the animal.

5. The method of claim 4, wherein the lipoxygenase inhibitor is NDGA.

6. The method of claim 5, wherein the NDGA dose ranges from about 0.01% to about 5% by weight in diet.

7. The method of claim 5, wherein the NDGA dose ranges from about 0.05% to

about 1% by weight in diet.

8. The method of claim 5, wherein the NDGA dose ranges from about 0.1% to about 0.5% by weight in diet.

9. The method of claim 2, wherein the lipoxygenase inhibitor is an anti-lipoxygenase antibody.

10. The method of claim 1, further comprising the step of:
administering CLA to the animal.

11. The method of claim10, wherein administering is feeding.

12. The method of claim 11, wherein the dose of CLA ranges from about 0.01% to about 5% by weight in diet.

13. The method of claim 11, wherein the dose of CLA ranges from about 0.05% to about 1% by weight in diet.

14. The method of claim 11, wherein the dose of CLA ranges from about 0.1% to about 0.5% by weight in diet.

15. The method of claim 1, wherein the reducing step comprises the step of lowering lipoxygenase level in the animal.

16. The method of claim 15, wherein the lowering step includes the step of administering into the animal an oligonucleotide that reduces or prevents translation of a lipoxygenase enzyme.

17. The method of claim 1, wherein the animal is selected from the group consisting of a mammal, an avian animal and a fish.

18. The method of claim 17, wherein the mammal is selected from a human, a primate, a bovine, a canine, a porcine, an ovine, a caprine, a feline and a rodent.

19. The method of claim 17, wherein the avian animal is selected from a chicken, a duck, a turkey and a quail.

20. A method for inhibiting LPL activity associated with a cell comprising the step of:

reducing lipoxygenase activity in the cell sufficient to inhibit LPL activity associated with the cell.

21. A method for inhibiting LPL activity associated with a cell comprising the step of:

treating the cell with a lipoxygenase inhibitor at a dose sufficient to inhibit LPL activity associated with the cell.

22. The method of claim 21, wherein the lipoxygenase inhibitor is selected from NDGA, AA861, Indomethacin, ETYA, SHA, Baicalein, 3,4-dihydroxycinnamic acid, cinnamyl-3,4-dihydroxy-a-cyanocinnamate, Gossypol, 5,6-dehydro arachidonic acid, Baeomycesic acid, Baicalein monohydrate, 3,4-dihydroxyphenyl ethanol, 4,5-dehydro docosahexaenoic acid, eicosatriynoic acid, 5-HETE lactone, 5(S)-HpETE, 12(S)-HpETE, 15(S)-HpETE, 15(S)-HETrE, 9,12-octadecadiynoic acid, a-pentyl-3-(2-quinolinylmethoxy)-benzenemethanol, BHA, BHT, 3-amino-1-/m-(trifluoromethyl)phenyl/-2-pyrazoline, and 6,9-diepoxy-6,9-phenylimino-delta 6,8-prostaglandin I 1.

23. The method of claim 22, wherein the lipoxygenase inhibitor concentration is from about 0.1 μM to about 5 mM.

24. The method of claim 22, wherein the lipoxygenase inhibitor concentration is from about 10 μM to about 500 μM.

25. The method of claim 22, wherein the lipoxygenase inhibitor concentration is from about 30 μM to about 200 μM.

26. The method of claim 21, wherein the lipoxygenase inhibitor is an anti-lipoxygenase antibody.

27. The method of claim 21, further comprising the step of:

treating the cell with CLA.

28. The method of claim 27, wherein the CLA concentration ranges from about 0.1 μM to about 5 mM.

29. The method of claim 27, wherein the CLA concentration ranges from about 10 μM to about 500 μM.

30. The method of claim 27, wherein the CLA concentration ranges from about 30 μM to about 200 μM.

31. The method of claim 20, wherein reducing lipoxygenase activity is accomplished by lowering lipoxygenase level in the cell.

32. The method of claim 31, wherein lowering lipoxygenase level is accomplished by treating the cell with an antisense oligonucleotide of lipoxygenase mRNA.

33. The method of claim 20, wherein the cell is 3T3-L1 adipocyte.

34. A method for reducing triacylglyceride level in a cell comprising the step of:

reducing lipoxygenase activity in the cell sufficient to reduce triacylglyceride level in the cell.

35. A method for reducing triacylglyceride level in a cell comprising the step of:

treating the cell with a lipoxygenase inhibitor at a dose sufficient to reduce triacylglyceride level in the cell.

36. The method of claim 35, wherein the lipoxygenase inhibitor is selected from NDGA, AA861, Indomethacin, ETYA, SHA, Baicalein, 3,4-dihydroxycinnamic acid, cinnamyl-3,4-dihydroxy-a-cyanocinnamate, Gossypol, 5,6-dehydro arachidonic acid, Baeomycesic acid, Baicalein monohydrate, 3,4-dihydroxyphenyl ethanol, 4,5-dehydro docosahexaenoic acid, eicosatriynoic acid, 5-HETE lactone, 5(S)-HpETE, 12(S)-HpETE, 15(S)-HpETE, 15(S)-HETrE, 9,12-octadecadiynoic acid, a-pentyl-3-(2-quinolinylmethoxy)-benzenemethanol, BHA, BHT, 3-amino-1-/m-(trifluoromethyl)phenyl/-2-pyrazoline, and 6,9-diepoxy-6,9-phenylimino-delta 6,8-prostaglandin I 1.

37. The method of claim 35, wherein the lipoxygenase inhibitor concentration is from about 0.1 μM to about 5 mM.

38. The method of claim 35, wherein the lipoxygenase inhibitor concentration is from about 10 μM to about 500 μM.

39. The method of claim 35, wherein the lipoxygenase inhibitor concentration is from about 30 μM to about 200 μM.

40. The method of claim 35, wherein the lipoxygenase inhibitor is an anti-lipoxygenase antibody.

41. The method of claim 35, further comprising the step of:

treating the cell with CLA.

42. The method of claim 41, wherein the CLA concentration ranges from about 0.1 μM to about 5 mM.

43. The method of claim 41, wherein the CLA concentration ranges from about

10 μM to about 500 μM.

44. The method of claim 41, wherein the CLA concentration ranges from about 30 μM to about 200 μM.

45. The method of claim 34, wherein reducing lipoxygenase activity is accomplished by lowering lipoxygenase level in the cell.

46. The method of claim 45, wherein lowering lipoxygenase level is accomplished by treating the cell with an antisense oligonucleotide of lipoxygenase mRNA.

47. The method of claim 34, wherein the cell is 3T3-L1 adipocyte.